

Department of Agribusiness and Applied Economics
North Dakota State University
July 1, 2000 to June 30, 2001
Annual Report

Table of Contents

Table of Contents.....	2
Department Highlights.....	3
Introduction and Departmental Overview.....	4
I. GOALS/ACCOMPLISHMENTS CURRENT YEAR (COLLEGE/UNIT).....	6
A. DISSEMINATION - INSTRUCTION AND STUDENT SUCCESS	6
1. Teaching Initiatives	6
2. Incorporation of Technology in Teaching	8
3. Advising Efforts	9
4. Curriculum Development	9
5. Accreditation or Other Reviews	10
6. Activities in Student Recruitment/Retention, Enrollment Management, and Other Student Activities.....	10
7. Employment of Graduates	11
8. Senior Professors Teaching Freshman and Transfer Students	11
9. Summer School Activities	11
10. Awards and Recognition of Faculty/Students	12
11. Extension Service Teaching	12
B. RESEARCH/SCHOLARSHIP	14
1. Highlights of Research and Scholarly Activity (Calendar year 2000).....	14
2. Grants/Contracts/Research	17
3. Articles/Books/Publications (Calendar year 2000)	20
4. Selected Presentations before Professional Audiences (Calendar year 2000).....	24
C. OUTREACH.....	28
1. Professional Service	28
2. Alumni Events and Other Community-Related Activities	28
3. Fund-Raising Accomplishments.....	28
4. Other Outreach Activities.....	28
D. SPECIAL INITIATIVES	29
1. Cultural Diversity	29
2. Affirmative Action/Equal Opportunity.....	29
3. Cooperation Programming/Interdisciplinary Efforts/Interinstitutional	29
4. International Activities	30
5. Economic Development Efforts	30
6. Assessment	30
7. Addressing Institutional Purposes	32
8. College/Unit Planning; Functions/Activities/Accomplishments.....	32
E. Other Goals	33
II. COMMENTS	33
III. APPENDIX.....	35

Department of Agribusiness and Applied Economics
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Annual Highlights

Teaching

- Enrollments have dropped slightly from approximately 170-180 majors through the 1990's in Agricultural Economics to between 150-160 in AY01.
- Internet and other electronic teaching methods are being incorporated into instruction both on-campus and for delivery via distance education channels
- Two new majors have been added to the traditional B.S. degree in Agricultural Economics: Agribusiness (approved 2000) and Economics (housed in the Department starting summer 2001)
- Four of the newest members of the faculty received NDSU awards for teaching excellence in AY01: Eric DeVuyst, Cheryl DeVuyst, Eric Schuck, and William Nganje

Research

- Eighteen journal articles and 25 departmental research reports were published in 2000 presenting research results from a variety of projects addressing North Dakota problems in wheat marketing, international trade, farm risk management, natural resource concerns, and rural development.
- The department enjoys a national reputation in research of wheat quality issues, commodity transportation policies, and international agricultural trade.
- New and continuing grants and contracts totaled \$3,387,893 for the year FY01.

Extension/Outreach

- The Extension faculty continues to respond to immediate state needs, such as providing economic analysis of damages from adverse weather events and providing accurate information indicating farm income situation within the state
- George Flaskerud received the College of Agriculture Excellence in Extension Award, Senior Career, in 2001.

Introduction and Departmental Overview

We have just experienced another year of change in the Department. The name of the Department was officially changed in June 2000 to the Department of Agribusiness and Applied Economics. The name change reflects both the current emphases on agribusiness in the department, as well as the growing importance of more general applied economic analysis by the faculty.

Formal approval from the State Board of Higher Education has also been received for the establishment of a B.S. degree with a major in Agribusiness. Formalizing this major has been an objective of the Department since the late 1980's. Cooperation with the College of Business Administration led to a new degree having wide appeal to both rural and urban students, as well as providing a pool of highly trained agribusiness professionals for careers in this important sector of the U.S. economy.

University responsibility for the Economics program will officially move to the Department in July 2001. Concurrent with this programmatic change has been the addition of Drs. Ed O'Relley and Stan Herren to the Department. We will operate at overcapacity for the next two years given the increase in students in the Economics courses without commensurate increases in resources available. Additional faculty resources should become available in July 2003 for teaching general Economics courses.

Faculty and staff were recognized for the excellence of their contributions to NDSU during the year. Eric DeVuyst received the College of Agriculture Excellence in Teaching Award, Junior Career. Eric DeVuyst, Cheryl DeVuyst, William Njanje, and Eric Schuck all received the NDSU Apple Polishers' Award in the spring of 2001. With their awards, the Department received four of the total 26 awards offered this year. George Flaskerud was recognized for the value of his Extension programs through his receipt of the College of Agriculture's Excellence in Extension, Senior Career, Award in the spring of 2001. Carol Jensen, office publications manager, received the College of Agriculture's Professional Support Staff Award in 2001.

Faculty changes continue to be the norm in the Department. Demcey Johnson resigned from the Department during AY01 to take a position with the Economic Research Service in Washington D.C. Eric Schuck will also be leaving for a new position at Colorado State University during the summer of 2001. We have hired one new faculty member, Dr. Camilo Sarmiento, who will join the Department in August 2001. Searches are currently open for a natural resource economist and an Extension economist with specialization in livestock production and marketing. Four new assistant research professors are being added to increase the staff in the Northern Plains Trade Research Center.

The Department continues to teach on an overload basis. A total of 61 sections were taught during AY01 (25 sections in the fall, 29 in the spring, and 2 during the summer of 2001). In total, the department generated 10.55 student FTEs on an appropriated teaching budget of 5.07 FTEs. Faculty from the Upper Great Plains Transportation Institute and Agricultural Communications assisted in meeting the department's teaching responsibilities.

Eighteen refereed journal articles were published in calendar year 2000 on a research budget of 9.9 tenure-track Station FTEs. New and continuing extramural grant dollars yielded a grant and contract budget for the Department of \$3,387,893. Extension activities included more than 50 programs offered around the state. The growing importance of Information Technology in dissemination is increasing the efficiency of both classroom and off-campus program delivery.

This annual report highlights general departmental activities. More specific information can be found for:

The Department of Agricultural Economics at North Dakota State University:

<http://www.ext.nodak.edu/homepages/aeddept/index.html>

Northern Plains Trade Research Center

<http://www.ag.ndsu.nodak.edu/nptrc/>

The Quentin Burdick Center for Cooperatives:

<http://www.ag.ndsu.nodak.edu/qbcc/>

The North Dakota State Data Center:

<http://www.sdc.ag.ndsu.nodak.edu/>

I. GOALS/ACCOMPLISHMENTS CURRENT YEAR (COLLEGE/UNIT)

A. DISSEMINATION - INSTRUCTION AND STUDENT SUCCESS

1. Teaching Initiatives

Highlights of this year's innovations in teaching include:

1. Following the recommendations of the CSREES review conducted in May 2000, the faculty has begun to rationalize course offerings. Recommended changes and their status are:

			Status as of 6/5/01
FARM AND AGRIBUSINESS MANAGEMENT I	AGEC242	Include basic financial statement information	Internal
AGRICULTURAL FINANCE I	AGEC246	Eliminate basic financial information now in 242	Internal
AGRICULTURAL MARKETING	AGEC250	Eliminate due to insufficient enrollment	External - Proposal at COA committee
AGRICULTURAL FINANCE II	AGEC346	Rationalize with 246/446 and CBA offerings	Internal
PRINCIPLES OF REAL ESTATE	AGEC347	New instructor with intensive technology component	Internal
NEGOTIATION	AGEC355	Delete due to instructor retirement and similar offering in CBA	External - Proposal at COA committee
COOPERATIVES	AGEC374	Offer via distance ed to Dickinson State	Offered in Fall 2000
AGRICULTURAL LAW	AGEC375	Offer via distance ed to Dickinson State	Offered in Spring 2001
PUBLIC POLICY CHOICES	AGEC380	Eliminate due to program priority changes	External - Proposal at COA committee
RESOURCE ECONOMICS	AGEC381	Convert to ECON 482	External – Approved May 2001
ECONOMICS OF STATE AND LOCAL GOVERNMENT	AGEC382	Eliminate due to program priority changes	External - Proposal at COA committee
AGRISALES	AGEC396	Propose as permanent course	External - Proposal at COA committee
MARKETING CAPSTONE	AGEC442	Eliminate due to program priority changes	External – proposal being forwarded to COA committee
AGRICULTURAL MARKET ORGANIZATION	AGEC445	Title change – Agricultural Industrial Strategy	External - Proposal at COA committee
AGRIBUSINESS FINANCE III	AGEC446	Rationalize with 246/446 and CBA offerings	Internal

NAMA_I	AGEC450	Convert to 3 credits and expand as marketing capstone with title change	External – proposal being forwarded to COA committee
AGRICULTURAL TRADE	AGEC470	Teach as last time in Fall 2001 – teach in future as ECON 472	Internal
NATURAL RESOURCES	AGEC480	Convert to ECON 481/681	External – Approved May 2001
AGRICULTURAL POLICY	AGEC484	Convert to 3 credits	External – Approved May 2001
AGRICULTURAL MARKETING	AGEC744	Convert both 744/746 to 2-semester series in Agribusiness	External – proposal being forwarded to COA committee
RURAL INDUSTRY FINANCE	AGEC746		
RURAL AND NONMETRO TRANSPORTATION SYSTEMS	AGEC771	Title change – Economics of Transportation	External – Approved May 2001
STATEWIDE TRANSPORTATION PLANNING	AGEC774	Eliminate	External – Approved May 2001
TRANSPORTATION ADMINISTRATION	AGEC778	Eliminate	External – Approved May 2001

2. Initiated peer teaching reviews in spring 2001. The reviews were entirely voluntary and review comments were confidential between the instructors and the review teams. The following courses were evaluated and peer comments were provided to the course instructors:

Course:	Reviewed by:
> AGEC246 (C. DeVuyst)	Schuck, Wilson, & Kim
> AGEC399 (Wachenheim)	Petry & Leitch
> AGEC375 (Saxowsky)	E.DeVuyst & Nganje
> AGEC344 (Kim)	Schuck & E.DeVuyst
> ECON343 (Park)	Wachenheim

Informal discussions with students indicated that the instruction in several courses improved following the reviews. Comments received from faculty as both reviewers and as instructors of the reviewed courses were favorable in terms of generating ideas for teaching improvements.

3. An evaluation of faculty advising was conducted in the spring semester. Feedback was received from 66 current students in the program providing comments on 12 faculty advisors. Results indicated divergence in students' perceptions of advising effectiveness of different faculty. Aggregated results for the Department are listed below:

My Advisor is well prepared to help me with:	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly
Course selection	28	23	6	8	1
Career planning	19	22	15	6	4
University life	19	22	15	6	4
My advisor cares about me	28	24	10	3	1
I would recommend my advisor to others	28	21	8	5	4

4. A departmental teaching workshop was conducted in August 2000. The workshop was organized by Eric DeVuyst. Dr. Kirby Barrick, Associate Dean for Academic Programs in the College of Agricultural, Consumer and Environmental Sciences at the University of Illinois conducted the day and a half teaching workshop August 23rd and 24th.

5. The recruitment efforts of Dr. Cheryl Wachenheim further boosted student enrollment in the Study Abroad program established with the Ecole Superieure d'Agriculture of Angers, France. 19 students participated in the program during the summer of 1999. The summer, 2000 enrollment was 28, a growth rate of 47% over 1999 participation. The number of students participating in the program in the summer of 2001 was 24. Further international collaboration is anticipated with both European and Asian universities.

2. Incorporation of Technology in Teaching

The Department continues to adopt new technology to enhance teaching. Class information is available on the web for all classes taught by the Department. Course information can be found at:

http://www.ext.nodak.edu/homepages/aeddept/classes_spring.htm

An increasing number of instructors are preparing and delivering class notes over the internet. Student comments have been universally favorable with respect to this innovation. Three classrooms in Morrill Hall are currently equipped with networking consoles for use of computer delivery of course materials. Although student comments are favorable towards use of web-based instructional media, challenges arise in developing effective procedures for using this technology. Feedback from students stresses the importance of using web-based materials to augment, not supplant, classroom interaction.

One of the classrooms available to faculty in Morrill Hall (MO 111) was converted during the summer of 1999 to a computer-assisted teambuilding classroom. This classroom has been adopted by several faculty for both the lab components of their classes as well as to facilitate preparation of team projects.

The Department's internet site continues to be updated with reports of student activities. New additions to the OnLocation site this year include reports from the NAMA team during the competition in Denver and daily entries from the 24 students participating in this year's summer exchange program with the Ecole Superieure d'Agriculture in Angers, France.

3. Advising Efforts

Students majoring in Agricultural Economics are assigned individual advisors. A rotating schedule of assignments assigns three faculty to incoming freshmen and transfer students each year. Faculty retain the same advisees during the students' progress through their undergraduate programs. The number of advisees assigned to each faculty member averages approximately fifteen students. There were 153 undergraduate students listed as Ag Econ (144 students) or Agribusiness (9) majors at the beginning of the spring 2001 semester.

4. Curriculum Development

Courses taught and FTEs generated for the 2000-2001 academic year are listed in Appendix A.

The faculty continue to teach courses in excess of their appointments funded from instruction.

The following table includes departmental faculty with teaching appointments, the number of student FTEs generated from coursework, independent studies, and master student thesis supervision during AY01, the proportion of their position funded from instructional accounts, and the excess being supported from research funds.

<i>Instructor</i>	<i>FTEs Generated</i>	<i>Appointment</i>	<i>Overload</i>
DeVuyst, C	0.35	0.30	0.05
DeVuyst, E	0.77	0.50	0.27
Koo, W	0.21	0.20	0.01
Lambert, D	0.44	0.10	0.34
Leitch, B	0.95	0.50	0.45
Mack, L	2.86	1.00	1.86
Nelson, B	0.20	0.45	-0.25
Nganje, W	0.49	0.50	-0.01
Petry, T	1.26	0.50	0.76
Schuck, E	0.23	0.10	0.13
Shultz, S	0.62	0.20	0.42
Wachenheim, C	0.65	0.40	0.25
Wilson, W	0.34	0.32	0.02
Others *	1.18	---	1.18
Total	10.55	5.07	5.48

* - *Others* include instructors paid from overload funds and instruction provided by staff in other units, including Agricultural Communications and the Upper Great Plains Transportation Institute.

Major curriculum changes are included under the *Teaching Initiatives* heading. Three majors are now offered in the Department:

Agribusiness (approved by the SBHE in June 2000)– the Department is collaborating with the College of Business Administration (CBA) to provide a B.S. degree with a major in Agribusiness. Emphasis areas include Agribusiness Finance, Agribusiness Management, and Agribusiness Marketing. Students concurrently satisfy requirements for a minor degree in the CBA. The number of students in this major has grown from both new students requesting this major as well as conversions of our current Agricultural Economics students to this major during this first year of its availability.

Agricultural Economics – Students preferring more disciplinary training in economics or expressing interest in other areas of applied economics, such as natural resource economics or international trade, may select the Agricultural Economics degree.

Economics – Beginning in July 2001, the major in Economics will move from its temporary, one-year home in CBA to this Department. Two faculty will move to the Department on July 1, 2001 from CBA. Course offerings will grow in the future as new faculty are added beginning July 2003 and several existing AGECE courses are converted to the ECON program of study.

5. Accreditation or Other Reviews

No accreditation or other reviews were conducted during 2000-2001.

6. Activities in Student Recruitment/Retention, Enrollment Management, and Other Student Activities

Student Recruitment/Retention

Full color brochures were prepared during the summer of 2000 describing the department's Agribusiness degree. Copies were mailed to high school counselors and economics instructors around the state in the fall. Copies were also mailed to prospective students expressing an interest in the program during recruitment trips conducted by college and university staff.

However, recruitment efforts need to be increased for AY02. Given changing state demographics, the department needs to develop a higher profile for its programs in the urban areas of the state. Personal visits are planned for the fall of 2001 to urban high schools to describe course and programs offered by the department. Preliminary enrollment figures for fall 2002 reflect a slight drop in majors. Recruitment will be a primary area of focus during AY02.

A problem mentioned in last year's annual report relative to graduate student recruitment was the low salary associated with graduate research assistantships relative to other schools offering M.S. degrees. Consequently, stipends were increased 22% for the 2000-2001 academic year. As a result, seven students entered the program in the fall 2000 semester. Increased recruitment efforts spearheaded by William Nganje has increased funded enrollment for the fall 2001 semester to at least nine students.

Enrollment Management

Student records are maintained by front office staff. Number of students and contact information is available via these records.

Other Student Activities

Clubs – The primary clubs for agricultural economics majors are the Agribusiness Club and the student chapter of NAMA. The Agribusiness Club hosts many fundraising and social events during the year. An annual award banquet in the spring honors both outstanding undergraduates and leaders in the state's agribusiness industry. The NAMA chapter works all year in developing a marketing plan for an innovative agribusiness product. The chapter's efforts culminate in presentations at the annual NAMA competition. Faculty participation is active in both groups.

Scholarship - The Department of Agricultural Economics has the most successful scholarship program on campus. Over \$50,000 was awarded to 65 deserving agricultural economics majors. The Student Services Committee spent considerable time distribution, monitoring, and generating correspondence for these scholarships.

7. Employment of Graduates

Both graduate and undergraduate students from the Department continue to encounter excellent job prospects. Long-term trends indicate approximately 30% of the graduating seniors return to family farming. The majority of the remaining graduates find employment with firms such as John Deere, ADM, Cenex, and other agribusiness companies. The average entry level salary of the undergraduates, excluding those returning to farming, was over \$30,000. Personal contacts by agribusiness faculty resulted in the recruitment and placement of several undergraduate and graduate students in high profile positions in firms such as ConAgra.

8. Senior Professors Teaching Freshman and Transfer Students

There is no departmental policy emphasizing the teaching of freshman and transfer students by senior faculty.

9. Summer School Activities

The department's summer course offerings have been in association with the study abroad program in France. This program involved Dr. Wachenheim during May-June of 2001. Twenty four NDSU students participated.

However, course support is offered for two Economics courses, which are being taught by faculty moving to the Department on a full-time basis in July of 2001.

Summer graduate school efforts during the summer are focussed on advisement of graduate students and overseeing thesis research.

10. Awards and Recognition of Faculty/Students

The following faculty awards were received during academic year 2000-2001:

Eric DeVuyst received the College of Agriculture Excellence in Teaching Award, Junior Career, in 2001. He was also nominated for the American Agricultural Economics Association's Teaching Award, but did not receive the award.

Eric DeVuyst, Cheryl DeVuyst, William Nganje, and Eric Schuck all received the NDSU Apple Polishers' Award in the spring of 2001. With their awards, the Department received four of the total 26 awards offered this year.

Tim Petry received the *Premier Forecaster Award* from the American Agricultural Economics Association at the annual meetings in August 2001.

George Flaskerud received the College of Agriculture Excellence in Extension Award, Senior Career, in 2001.

Carol Jensen, office publications manager, received the College of Agriculture's Professional Support Staff Award in 2001.

11. Extension Service Teaching

Agribusiness and Applied Economics Extension economists continue to provide outreach to agricultural and business leaders in the state using traditional delivery methods. Workshops, distribution of reports, preparation of video-tape teaching materials, personal contacts, and short informational items in media are the mainstay of Extension delivery. In addition, Extension has been active in adopting newer dissemination methods.

Extension educational materials are prepared and distributed throughout the state. A sample of teaching packets, surveys, pre/post tests, case studies, marketing plans, supplements, exercises, examples, and miscellaneous handouts are included in this section. Substantial concentrations of time were required for development of these research based materials which are extensively used by farmers and educators in the Northern Plains.

Samples of Extension Service Teaching Programs in AY01

Aakre, Dwight. *Land Rent Economics Curriculum.* Dwight developed a teaching packet for teaching land rent economics for county agents to use. This teaching curriculum is county specific and takes the audience through the process of estimating an affordable cash rent agreement. Also included is material on the crop yield history for each county. This has been used by several county agents to teach this subject in their respective counties and lessened my travel requirements.

Aakre, Dwight. *Beef Cattle Cycles and Outlook for Prices Curriculum.* Dwight developed a teaching packet on beef cattle outlook. This packet includes numerous charts and graphs covering inventory, supply, production, demand, imports, exports, and productivity covering several cattle cycles. Also included is my current projection for feeder cattle prices over the next five years. This packet was put together for a county agent needing this material for an

area meeting. I have distributed this packet to all county and area agents with the livestock emphasis as well as agents with the farm and family emphasis. This packet was also sent to farm business management instructors in North Dakota.

Flaskerud, George. Seasonal price pattern Extension publications were prepared to enable producers to make marketing decisions based on price patterns for different levels of new crop supplies. In another project, George explains the Winnipeg canola futures market and compares hedging alternatives as one of several preharvest and harvest/postharvest marketing strategies evaluated from an historical perspective.

Kraenzel, David. David is developing “An Economic Model for Program Management in Extension Distance Education”. The need for interdisciplinary, activity-based-management (ABM) distance education information and analyses is well documented in the literature. The creation of such a model will deliver a more accurate definition of the revenues, costs and performance measures involved in delivering Extension educational programs at a distance within North Dakota and the region. The model also provides a timely assessment of the current financial status of programs as they are implemented, thus providing a senior-level management tool for administrators. The ultimate value of such a model is in its social and economic contribution to facilitating learner access to new stand-alone Extension distance education programming and new follow-on programming (that builds on existing programs) to rural and urban locations in North Dakota and the region.

Swenson, Andy. Projected crop budgets, on both an economic and cashflow basis, were constructed for major and minor crops for eight geographic regions of North Dakota. The budgets are available on our website and about 7,000 copies were printed and distributed at educational meetings, through county offices and by request. The budgets are used throughout the state by farmers, lenders and educators to make planting decisions and to evaluate the economics of different crop alternatives. The budgets have also been used by consulting firms, agribusiness, and researchers throughout the country and internationally.

Tweeten, Kathleen. Extension teaching includes (1) OCRE training, designed for community education officials on strategic planning and funding availability through QZAB (Qualified Zone Academy Bonds); (2) Agritainment in North Dakota, a series of workshops and supporting materials to assist small business owners in developing businesses for natural resource based tourists; (3) Youth Entrepreneurship, a component of Marketplace for Kids to encourage entrepreneurial thinking among the state’s youth; (4) Community Strategic Planning, workshops conducted in local communities in the state to assist local decision makers to develop community strategic plans and seek external funds for plan implementation; (5) Asset Mapping For Communities, a seminar developed to assist community leaders identifying potential new leaders in their community; (6) Indian Health Services Community Health Day, a workshop to encourage building social capital among Native American populations within the state; (7) Home Based Business, educational programming developed to assist people to identify and exploit business opportunities in their local communities.

B. RESEARCH/SCHOLARSHIP

The mission of this unit is to provide objective economic analysis and to support informed decision making in areas of resource allocation, business management, and public policy for the people of North Dakota and beyond (from the Department's mission statement adopted February 26, 1992).

In addition to contributing new knowledge, economics research is essential to the maintenance of effective and relevant educational and outreach efforts. Individual faculty members are encouraged to develop research programs in their areas of specialization to increase the value of their contributions to the people of North Dakota.

1. Highlights of Research and Scholarly Activity (Calendar year 2000)

Departmental Initiatives

The importance of the work in agricultural policy and international trade conducted by Won Koo was recognized this year by a federal appropriation of over \$2,000,000 to conduct research and outreach activities in areas of importance to the agricultural economy of the Northern Great Plains. Dr. Koo has hired several research associates, has provided support to departmental faculty to conduct trade research, and organized a major conference on the importance of the North American Free Trade Area to agriculture in October 2000.

The Department received funding from the North Dakota legislature in the 1999-2001 biennium to investigate the economics of agricultural biotechnology. Research resulting from these efforts were highlighted at a conference April 5, 2001 in Fargo. Presentations included discussions of both first and second generation products resulting from transgenic crops. Specific presentations included: Round-up Ready Sugar Beets (Cheryl DeVuyst and Cheryl Wachenheim), Identification of Desirable End Use Characteristics (Bill Wilson), Valuation of New Varieties (Dave Lambert), Maintaining Heterogeneity – The Costs of Identity Preservation (Bill Wilson), and International Trade Impacts of Biotechnology Products (Eric DeVuyst).

Individual Research Highlights

DeVuyst, Cheryl. Trade allowances and the relationship between food manufacturers and grocery retailers was the focus of one project. Slotting allowances and failure fees in the food industry were highlighted. While these trade allowances have migrated from packaged goods into the produce and meat departments of retail grocers, this research continues with an upcoming analysis of slotting in the meat industry and how slotting impacts meat processors.

DeVuyst, Cheryl. Changes in information technology have had a major impact on our lives and businesses. Banks are increasingly using web sites, e-mail and computerized business applications, but how does information technology impact the efficiency and profitability of banks? An ongoing study in conjunction with the North Dakota Bankers Association addresses adoption of information technology for bank operations and what effects technology has had on North Dakota banks.

DeVuyst, Eric. Continued to work on cropping data from Mandan ARS. The goal of the project is to evaluate the relative economic returns from continuous cropping vs. a wheat-fallow rotation. basic economic analysis has been completed. In January, I will begin writing the results for publication.

Lambert, David. Work with Bill Wilson resulted in a novel procedure to incorporate field and lab analyses of spring wheat varieties to determine the relative values of different varieties in meeting specified levels of desirable milling and baking characteristics. The divergence between varieties having desirable agronomic traits and varieties having high value to end users indicates the need for breeding programs to focus on both the agronomic properties as well as the marketability of new varieties.

Leistriz, F. Larry. Expanded processing of agricultural products in rural areas has been widely pursued as a strategy for community economic development, both in North Dakota and elsewhere in the region. Expansion of value-added agricultural processing in rural areas is generally seen as a positive development; however, this expansion has not been without its problems for some communities. The objective of a recently completed study was to gain a better understanding of the socioeconomic impact of new agricultural processing plants. The impacts of these plants on rural communities were evaluated through data collected from community leaders, company officials, and area residents in four North Dakota towns that are the sites of new agricultural processing facilities, developed during the 1990s. Study results indicated that improved job opportunities and enhanced incomes were generally seen as major positive effects of each of the new processing plants. Residents' incomes were enhanced both by the plants' jobs and payroll (which often represented second incomes for area households) and by increased incomes for area farmers (either from dividends paid directly by the processing plants, or from higher prices for a crop already being produced, or by allowing producers to raise a commodity that previously had no viable market). Because most of the plant jobs were taken by persons already living in the area, the new plants did not lead to substantial immigration or major population growth in the host communities, but rather served to stabilize the local economy and population (or to slow the rate of decline). Of all the effects of the plants, only air quality and water quality were more often rated as negative than positive by local residents. However, interviews with community leaders indicated that even these effects did not constitute major problems or issues.

Nelson, William. Value-added cooperatives in the Northern Plains have had major financial difficulties during the past year for a variety of reasons, including marketing, production line difficulties, financial and equity management, and under-capitalization. The major research and training programs of QBCC are focused on these issues. Given the substantial farmer and rural community investment in these cooperatives and limited liability companies, and their impact on employment in rural communities, it is essential to provide as much support as possible to assist these entities to remain viable.

Petry, Tim. Work continues to add value to their lambs. Petry has helped lamb producers secure three grants, conducted a feasibility study, and has identified and analyzed niche marketing opportunities for lamb products. The producers recently formed the Dakota Lamb Growers Cooperative and completed a successful equity drive where 102 members committed 8000 lambs for processing and marketing natural and premium lamb products under the Dakota Lamb label. Petry's involvement has been instrumental in developing this new

generation cooperative, which will have a significant positive impact on the lamb industry in the region.

Rathge, Richard. An unusual research project I conducted this year was an evaluation of the summer flooding that occurred in the Fargo/Moorhead area. I developed an automated survey instrument that included parcel location of each respondent which could be read directly into a Geographic Information System (GIS). Surveys were mailed to every household and business in Fargo. The data were scanned and input into GIS and used to assist the city identifying the relationship between infrastructure (e.g., streets, sewer lines) and flooding. The data also assisted in quantifying the financial cost of flooding and was used in applications for assistance from FEMA. The methodological approach was used to document the value of cluster sampling for quick response survey design.

Wachenheim, Cheryl. The perceptions of 584 residents of the North Central Region of the United States towards agriculture were elicited by phone survey. Respondents shared their perceptions of the impact of agriculture on the local economy, farmers' interaction with the environment, the role of farm structure on the environment, economy, and society, the responsibilities of non-farm residents, and the role of government in assisting farmers, protecting the environment, and restricting the size of livestock farms. In general, respondents had a favorable view of agriculture. They overwhelmingly agreed that farmers have a positive impact on their local economy. Overall, farmers were considered good environmental stewards and existing environmental regulations were perceived as appropriate. Respondents had strong negative opinions about how the consolidating structure of agriculture will influence the environment, society, and local economies, and a majority agreed the government should do more to help farmers in their area stay in business.

Wachenheim, Cheryl. Co-product demand schedules were estimated for individual livestock classes within the Central Crop Reporting District of North Dakota. Wheat middlings, potato waste, and sugarbeet pulp are three co-products produced from firms processing agricultural commodities in Eastern North Dakota. When these locally produced co-products are competitively priced with other available feedstuffs, they can be an important ration component for livestock in North Dakota. Particularly important consumers of co-products because of their relative predominance in the state are beef cows. The co-product value to beef cows in the Central Crop Reporting District alone is approximately 9 million dollars.

Wilson, William W. There are major changes occurring in the structure of the U.S. exporting industry which has been a focus of the research under this project. The project has resulted in numerous publications, presentations and was cited in a *FedGazette* summary as well as used in Congressional hearings on changes in the structure of this industry. Generally, these changes are resulting in cost reductions in most functions including transport, handling, quality control and transactions, ultimately leading the U.S. to a very low cost exporting country.

2. Grants/Contracts/Research

New and continuing grants and contracts provided \$3,387,893 available as the adjusted budget for fiscal year 2001 (7/00-6/01). FY01 expenditures from these extramural sources through May 31, 2001 were \$761,318. Listed below are selected grants awarded to faculty in the department. Numbers do not add up to the adjusted departmental grant and contract budget due to sharing of grant resources among other departments and universities.

DeVuyst, Cheryl. "CWAE Tracking Survey - Continuation Funding." AAFA Foundation, \$500 of administrative funds, other funds will be housed at Michigan State Univ

DeVuyst, Cheryl. "Modeling Channel Relationships in Agribusiness." Summer salary funding through Dr. Schnell, \$3000 for June 2000.

Koo, Won. "Agricultural Trade and Policy Studies for the Northern Plains Region." U.S. General Service Administration. \$2,000,000. December 2000 - January 2004.

Koo, Won. "Bilateral Trade of Agricultural Commodities and Products under CUSTA." U.S. Customs Office, \$500,000. November 1999 - February 2002.

Koo, Won. \$7,500 for Conference, "Global Agricultural Trade in the New Millennium," held in New Orleans, May 25-26, 2000, Farm Foundation, May 2000.

Koo, Won. \$5,000 for Conference, "Challenges in Agricultural Trade under CUSTA," Farm Foundation, June 2000

Koo, Won. \$3,000 for Conference, "Challenges in Agricultural Trade under CUSTA," Montana Trade Research Center, Bozeman, MT.

Flaskerud, George. "Marketing Club Facilitators Workshop." U.S.D.A. Risk Management Agency. \$6,600. June 2000 - July 2000

Flaskerud, George. "Update Seasonal Price Pattern Publication." North Dakota Grain Growers Association and the Farm Credit Services Associations in North Dakota headquartered in Fargo, Mandan, Minot and Grand Forks. \$2,500. June 2000 - December 2000

Flaskerud, George. "Develop Canola Marketing Publication." Northern Canola Growers Association. (one-third share of \$5,000). June 2000 - December 2000.

Leistriz, F. Larry. Agricultural Research Service, USDA, "Socioeconomic Assessment Component of TEAM Leafy Spurge IPM Demonstration Project," 2000-2001, \$54,478.

Leistriz, F. Larry. Lignite Energy Council, "Economic Contribution of the Lignite Energy Industry to North Dakota," 2000, \$ 2,500.

- Leistritz, F. Larry. USDA-CSREES, "Regional Center for Rural Development in North Dakota," 2000-2002, \$35,700.
- Leistritz, F. Larry. USDA-CSREES, "Economic Impact and Risk Assessment of Fusarium Head Blight in Wheat and Barley," 2000-2001, \$34,146.
- Leistritz, F. Larry. Fargo Event Center Steering Committee, "Economic Impact of proposed Fargo Event Center," 2000. \$2,500.
- Leistritz, F. Larry. North Dakota EPSCoR Committee, "Economic Impact of a typical EPSCoR Grant," 2000. \$2,000.
- Leistritz, F. Larry. North Dakota Coordinating Council for Cooperatives, "The Contribution of Cooperatives to North Dakota's Economy," 2000. \$7,000.
- Nelson, William. Market Analysis of the Demand for a Processed Livestock Waste Product, Minnesota Small Business Development Centers. \$22,500, 2000.
- Nelson, William. Conversion of 374 Cooperatives to the Internet, The Cooperative Foundation. \$8,700, 2000.
- Nelson, William. Economic Evaluation of Modified Field Pea/Canola Meal Rations for Swine, USDA/CSRS. \$4,605, 2000-2003,
- Nganje, William (with Cheryl DeVuyst collaborating). "Equity Management Issues in New Generation Cooperatives." USDA Cooperative Research Agreement No. RBS-00-13, Rural Business Cooperative Service, September 2000 - September 2002, \$66,666
- Nganje, William. Economic Impact of Fusarium Head Blight in Wheat and Barley. USDA Agreement No. 59-0790-0-075. April 2000 to April 2001 \$34,146.
- Petry, Tim. "Investigation of Niche Market Potential for North Dakota Lamb." \$2000, 2000
- Rathge, Richard. "Regional Center for Rural Development in North Dakota" USDA-CSRS, Co-PI, \$81,544, June 2000-2002
- Rathge, Richard. "North Dakota Kids Count" Dakota Medical Foundation, Investigator, \$14,300, Oct. 2000-June 2001.
- Rathge, Richard. "Depopulation Symposium" General Accounting Office, PI, \$57,000, Oct. 2000 - Oct. 2001
- Rathge, Richard. "Fargo-Moorhead Regional Labor Market Analysis-1999" Fargo/Cass County Economic Development Corporation, PI, \$42,025, Oct. 1999- April 2000.
- Rathge, Richard. "Barnes/Stutsman Regional Labor Market Analysis-1999" Barnes and Stutsman Counties Economic Development Corporation, PI, \$6,930.36, April 2000.

- Rathge, Richard. "ITS User Assessment Study" Information Technology Services, NDSU, PI, \$4,900, May 2000.
- Rathge, Richard. "Flood Survey" City of Fargo, PI, \$11,300, July 2000.
- Rathge, Richard. "Lisbon Medical Center Survey" Banner Health Systems, \$6,387, October 2000.
- Wilson, William W. and Cheryl Wachenheim. *Institutional and Market Factors Influencing the biotechnology Adoption in Northern Grown Crops and Oilseeds*, Agricultural Biotechnology–Social and Economic Effects, Initiative for Future Agriculture and Food Systems, USDA, Ag Econ Co-PI, \$208,425. Received October 2000, for 4 years.
- Wilson, William W. and George Flaskerud. *Price Risk Management Strategies for Canola*, Northern Canola Growers Assoc.\$5000. Sept. 2000.
- Wilson, William W. *Evaluation of Alternative IP/Niche Management and Procurement Strategies for New Generation Coops*, to the Cooperative Marketing Division, Rural-business-Cooperative Service, USDA, June 30, 2000, \$30,000. Accepted, August 24, 2000.
- Wilson, William W. *Implications of Alternative Wheat Cleaning Policies on U.S. Hard Wheats*, jointly with Mr. B Dahl, from the North Dakota State Wheat Commission, \$12,000, August 16, 2000.
- Wilson, William W. *Strategic Analysis for the US Frozen Dough Entry and Penetration*, \$30,000/year. (Annual contract, Jan. '98 to Dec. '00) USWP.
- Wilson, William W. *Market Development Support*, to the North Dakota State Wheat Commission, August 1, 2000, \$13,000.
- Wilson, William W. *Development of White Spring Wheat as an Alternative Crop*, extension of a project submitted to Alternative Crops Program, NDAES, May 29, 2000, joint with W. Berzonsky *et al.* \$149,290. Accepted July 1999 WW share=15,642 June 15, 1999 to June 14, 2002; extended, March 2, 2000, \$15,664.
- Wilson, William W. *Economic Impact and Risk Assessment of Fusarium Head Blight in Wheat and Barley*, joint with Drs. William Nganje, Demcey Johnson and Larry Leistriz, to the US Wheat and Barley Scab Initiative, CSREES-661, \$50,000. Accepted, Dec. 21, 1999.
- Wilson, William W. NRI *Quality Consistency and Variety Development Strategies in Wheat* NRI '98 Proposal, Principal Investigators: Drs. William Wilson, and Demcey Johnson. \$80,000 . Expires August '01
- Wilson, William W. North Dakota Wheat Commission, *Development of Materials for NCI Short Courses*, \$11,000/year, July 1998 -- extended to June 2001.

Wilson, William W. (70%), Won Koo (15%), and David K. Lambert (15%). *Market Opportunities for Biotechnologically Enhanced Crops in North Dakota*. Special ND Legislative funding, \$100,000. 7/1/1999 – 6/30/2001.

3. Articles/Books/Publications (Calendar year 2000)

Data regarding departmental publications are compiled on an annual basis. Consequently, publication lists cover the period January 1 – December 31, 2000.

Journal Articles for 2000

1. Bhuyan, S., and F. Larry Leistritz. "Cooperatives in Non-agricultural Sectors: Examining A Potential Community Development Tool." *Journal of the Community Development Society* 31(1):89-111, 2000.
2. Dahl, Bruce L., and William W. Wilson. "Grades/Classes of Hard Wheats Exported from North America: Analysis of Growth and Market Segments." *Review of Agricultural Economics* 22(1):172-191, 2000.
3. Koo, Won W., and I. Uhm. "U.S.--Canada Border Disputes in Grains: Dynamic Interface of Free Trade Agreements, Trade Remedy Laws, and Political Economy." *Minnesota Journal of Global Trade* 9(1):Winter 2000.
4. Kraenzel, D. G. "The Revolving Client Pool: One Solution to Value-Added Programming Challenges." *Journal of Extension*, December 2000 Issue, 38(6), <http://www.joe.org/joe/2000december/tt3.html>.
5. Lambert, David K., and W. Douglass Shaw. "Agricultural and Recreational Impacts from Surface Flow Changes Due to Gold Mining Operations." *Journal of Agricultural and Resource Economics*, Vol. 25, no. 2 (December 2000): 533-546.
6. Leistritz, F. Larry, and Randall S. Sell. "Socioeconomic Impacts of Agricultural Processing Plants." *Rural America*, 2000.
7. Leistritz, F. Larry, Sam Cordes, Randall S. Sell, John C. Allen, and Rebecca Filkins. "Characteristics of In-Migrants to the Northern Great Plains." *Great Plains Research*, 2000.
8. Leistritz, F. Larry, Sam Cordes, Randall S. Sell, John C. Allen, and Rebecca Filkins. "Immigrants to the Northern Great Plains: Survey Results from Nebraska and North Dakota." *Rural America* 15(3):8-15, September 2000.
9. Ramirez, O., and S. Shultz. "Poisson Count Models to Explain the Adoption of Agricultural and Natural Resource Management Technologies by Small Farmers in Central American Countries." *Journal of Applied Agricultural Economics* 32(1), April 2000.

10. Root, Ken, and F. Larry Leistritz. "Community Concerns with the Threat of Job Loss." *Community Sociology* Vol. 10:267-288, 2000.
11. Schlegel, M. L., C. J. Wachenheim, M. E. Benson, N. K. Ames, and S. R. Rust. "Grazing methods and stocking rates for direct-seeded alfalfa pastures: II. Pasture quality and diet selection." *Journal of Animal Science* 78(8), August 2000.
12. Schlegel, M. L., C. J. Wachenheim, M. E. Benson, J. R. Black, W. J. Moline, H. D. Ritchie., G. D. Schwab, and S. R. Rust. "Grazing methods and stocking rates for direct-seeded alfalfa pastures: I. Plant productivity and animal performance." *Journal of Animal Science* 78(8), August 2000.
13. Shankar, B., E. A. DeVuyst, D. C. White, J. B. Braden, and R. H. Hornbaker. "Nitrate Abatement Practices, Farm Profits, and Lake Water Quality: A Central Illinois Case Study." *Journal of Soil and Water Conservation*, 2000 (third quarter):296-303.
14. Wachenheim, C. J., Carlos Alonso, and Michael Dumler. "Marketing A Branded Fresh Beef Product." *Journal of Food Products Marketing* 6(1):53-79, 2000.
15. Wachenheim, C. J., J. R. Black, M. L. Schlegel, and S. R. Rust. "Grazing methods and stocking rates for direct-seeded alfalfa pastures: III. Economics of alternative stocking rates for alfalfa." *Journal of Animal Science* 78(8), August 2000.
16. Wilson, William W., and Bruce L. Dahl. "Logistical Strategies and Risks in Canadian Grain Marketing." *Canadian Journal of Agricultural Economics* 48(2000):141-160.
17. Wilson, William W., D. Demcey Johnson, and Bruce Dahl. "The Economics of Grain Cleaning on the Prairies." *Canadian Journal of Agricultural Economics* 48(2000):279-297.
18. Wilson, W., and W. Wilson. "Deregulation, Rate Incentives, and Efficiency in Railroad Shipping of Agricultural Commodities." *Review of Transportation Economics* Vol. 6, 2000.

2000 Book Chapters

1. Koo, Won W. "Wheat." In *Competitiveness in the U.S. Wheat Industry*, Haworth Press, 2000.
2. Koo, Won W., and I. Uhm. "Determinants of U.S. Foreign Direct Investment and Effects on U.S. Exports." Chapter 23, in *World Economy and International Trade*, ed., Ywon Sun Kim et al., Trade Management Press, Seoul, Korea, 2000.
3. Leistritz, F. Larry. "Agricultural Processing Facilities as a Source of Rural Jobs." In *Small Town and Rural Economic Development: A Case Studies Approach*, Peter V. Schaeffer and Scott Loveridge, eds., Westport, CT: Praeger.

4. Shultz, S. "Integrating Socioeconomic & Biophysical Data with a GIS to Plan Sustainable Resource Management Efforts in Central America." In *Global Warming and Sustainable Forest Management, Selected Case Studies from the Americas*, M. Dore and Ruben Guevara, eds., Aldershot, UK: Edward Elgar, 2000.
5. Wilson, W., and B. Dahl. "Pressures and Challenges in Integrating the U.S.-Canada Grains Sector." In *Canada-U.S. Trade Relations in the Global Food Regime*, G. Marchildon, ed., Regina: Canadian Plains Research Center, 2000.

Agribusiness & Applied Economics Reports for 2000

No. 450

Canadian Exports of Wheat and Barley to the United States and its Impacts on U.S. Domestic Prices, Mattson, Jeremy W., Won W. Koo

No. 449

Societal Perceptions of Agriculture, Wachenheim, Cheryl, Richard Rathge

No. 448

Challenges in Agricultural Trade under CUSTA - Highlights, Koo, Won W., Jeremy W. Mattson

No. 447

Financial Characteristics of North Dakota Farms 1997-1999, Swenson, Andrew L.

No. 446

2000 North Dakota Agricultural Outlook: Representative Farms 2000-2009, Koo, Won W., Richard D. Taylor, Andrew L. Swenson

No. 445

Procurement Strategies: Impacts of Quality Risks in Hard Wheat, Wilson, William W., Bruce L. Dahl, D. Demcey Johnson

No. 444

2000 Outlook of the U.S. and World Sugar Markets, Koo, Won W., Richard D. Taylor

No. 443

An Analysis of 1999 Gross Returns for Small Grains in North Dakota, Koo, Won W., Richard D. Taylor, Andrew L. Swenson

No. 442

Contribution of the Bison Industry to the North Dakota Economy, Sell, Randall S., Dean S. Bangsund, F. Larry Leistritz

No. 442-S (11-Page Summary of above report)

No. 441

Import Tenders and Bidding Strategies in Wheat, Wilson, William W., Bruce L. Dahl

No. 440

The Impacts of China's Accession into the WTO on the U.S. Wheat Industry, Koo, Won W.

No. 439

An Econometric Analysis of Demand for Meat and Fish Products in Korea, Jung, Jione, Won W. Koo

No. 438

2000 Outlook of the U.S. and World Wheat Industries, 1999-2000, Koo, Won W., Richard D. Taylor

No. 437

Agricultural Processing Plants in North Dakota: Socioeconomic Impacts, Leistriz, F. Larry, Randall S. Sell

No. 436

U.S.-Canada Border Disputes in Grains: Dynamic Interface Between the Free Trade Agreement and Trade Remedy Laws, Koo, Won W., Ihn H. Uhm

No. 435

Feasibility of a Sheep Cooperative for Grazing Leafy Spurge, Sell, Randall S., Dan J. Nudell, Dean A. Bangsund, F. Larry Leistriz, Tim Faller

No. 435-S (11-Page Summary of above report)

No. 434

The U.S. Cane and Beet Sugar Industry Under Alternative Trade Liberalization Policy Options, Koo, Won W.

Agribusiness & Applied Economics Miscellaneous Reports for 2000

No. 187

Impacts of DON in the Malting Barley Supply Chain: Aggregate Costs and Firm-Level Risks, Johnson, D. Demcey, William Nganje

No. 186

North Dakota's Lignite Energy Industry's Contribution to the State Economy, Coon, Randal C., F. Larry Leistriz

No. 185

Impediments to Controlling Leafy Spurge in the Northern Great Plains, Sell, Randall S., Dean A. Bangsund, F. Larry Leistriz

Staff Papers for 2000

AE 20001

North Dakota Lignite Energy Industry's Contribution to the State Economy for 1999 and Projected 2000, Coon, Randal C., F. Larry Leistriz

4. Selected Presentations before Professional Audiences (Calendar year 2000)

1. **Bangsund, Dean A.**, F. Larry Leistritz, and Randall S. Sell. 2000. "Assessing the Economic Impact of Noxious Weeds: The Case of Leafy Spurge," paper presented at 53rd Annual Meeting of Society for Range Management, Boise, ID, Feb. 13 - 18.
2. **DeVuyst, C. S.** 2000. "Strategic Business Decisions: Porter's Competitive Forces." Invited seminar, Purdue University, West Lafayette, IN, November 7.
3. **DeVuyst, C. S.** 2000. "Confronting Asymmetric Information with Slotting Allowances and Failure Fees." Invited seminar, Purdue University, West Lafayette, IN, November 6.
4. **DeVuyst, C. S.** 2000. "Confronting Asymmetric Information with Slotting Allowances and Failure Fees." Departmental seminar, NDSU, Fargo, ND, November 1.
5. **DeVuyst, C. S.**, 2000. "Slotting Allowances, Failure Fees and Asymmetric Information in the Retail Grocery Chain." Proceedings of the Annual Meetings of the Western Agricultural Economics Association, Vancouver, BC, June 29-July 1. (Selected paper)
6. **DeVuyst, C. S.**, 2000. "The CWAE Tracking Survey: Objectives, Methods and Results." Proceedings of the Annual Meetings of the Western Agricultural Economics Association, Vancouver, BC, June 29-July 1. (Organized symposium)
7. Johnson, D., **E.A. DeVuyst**, and W. Nganje, 2000. "Supply-Side Risks and Malting Barley Procurement and Storage," presented at the Annual Meetings of the Western Agricultural Economics Association, Vancouver, BC, June 29-July 1.
8. **DeVuyst, E.A.**, R. Hirschi, and J.B. Braden, 2000. "Easements as a Flood Mitigation and Risk Reduction Tool," presented at the Annual Meetings of the Western Agricultural Economics Association, Vancouver, BC, June 29-July 1.
9. R. Hirschi, **E.A. DeVuyst** and J.B. Braden, 2000. "Easements as a Flood Mitigation and Risk Reduction Tool," presented at SERA-IEG-31 "Economics and Management of Risk in Agriculture and Natural Resources," Gulf Shores, AL, March 23-25.
10. **DeVuyst, E.A.** "Subjective Bias and Voluntary Incentive Programs," Agricultural Economics Department seminar, North Dakota State University, Jan. 28, 2000.
11. **Kim, MinKyoung**, William Nganje, and Won W. Koo. "Exchange Rate and Bilateral Trade: Examples from CUSTA." Conference on Challenges in Agricultural Trade Under CUSTA, Fargo ND, October 26-27, 2000.
12. **Koo, Won.** Trilateral Trade of Agricultural Goods under NAFTA, School of Business, South Carolina State University, March 23, 2000.

13. **Koo, Won.** Modeling the U.S. and World Sugar Industries, Department of Food and Resource Economics, University of Florida, April 3, 2000.
14. **Koo, Won.** The Impacts of Trade Liberalization Policies on the U.S. Sugar Industry, Department of Food and Resource Economics, University of Florida, March 30, 2000.
15. **Koo, Won.** Major Issues for the U.S. Wheat Industry: Implications of China's entry to the WTO, International Conference, Global Agricultural Trade in the New Millennium, May 26, 2000.
16. **Koo, Won.** Agricultural Trade under CUSTA: Effects on the Domestic Prices, Department of Agricultural Economics, University of Saskatchewan, September 25, 2000.
17. **Koo, Won.** Unilateral and Multilateral Liberalization on Sugar and Implications on the U.S. and World Sugar Industries, Caribbean Agro-Economics Society, Nassau, the Bahamas, November 17, 2000.
18. **Lambert, David K.** and William W. Wilson. "End-user Gains from Input Characteristics Improvements." Selected paper, Annual Meeting of the Western Agricultural Economics Association. Vancouver, B.C. June 29-July 1, 2000.
19. **Leistritz, F. Larry,** and Kenneth A. Root. 2000. "Rural Community Response to the Closure/Downsizing of a Major Employer," paper presented at 39th Annual Meeting of Western Regional Science Association, Kauai, Hawaii, Feb. 26 - March 1.
20. **Leistritz, F. Larry,** and Randall S. Sell. 2000. "Socioeconomic Impacts of Agricultural Processing Plants," paper presented at 39th Annual Meeting of Southern Regional Science Association, Miami Beach, FL, April 13 – 15.
21. **Leistritz, F. Larry,** and Dean A. Bangsund. 2000. "Using Economic Impact Analysis in Evaluating Resource Management Alternatives: The Case of the National Grasslands in North Dakota," paper presented at the 20th Annual Meeting of the International Association for Impact Assessment, Hong Kong, June 19 – 23.
22. **Leistritz, F. Larry.** 2000. "The Future of Economic and Fiscal Impact Assessment," paper presented at the 20th Annual Meeting of the International Association for Impact Assessment, Hong Kong, June 19 - 23.
23. **Leistritz, F. Larry,** Sam Cordes, John Allen, Becky Filkins, and Randy Sell. 2000. "In-Migrants to the Northern Great Plains -- Survey Results from Nebraska and North Dakota," paper presented at Western Agricultural Economics Association Annual Meetings, Vancouver, BC, June 29 - July 1.
24. **Nganje, W. E.** and Gwen Stoltman. "Price Variability and Financial Risk for Sugar Beet growers." Selected Paper for the WAEA Annual Meetings, Vancouver, Canada, June 29-July 3, 2000.

25. **Nganje, W. E.**, Won Koo, Demcey Johnson, Joon Park, and Richard Taylor. "Operational Efficiency of U.S. Canada Wheat Pool: A Game Theory Analysis." Selected Paper for the WAEA Annual Meetings, Vancouver, Canada, June 29-July 3, 2000.
26. **Nganje, W.**, B. Streifel, F. Olson, W. Nelson and C. DeVuyst, 2000. "Financial Management Strategies of New Generation Cooperatives Under Alternative Risk Considerations." Proceedings of the Annual Meeting of NC-221 Regional Committee, Minneapolis, MN, October 2-3.
27. Johnson Demcey, Eric DeVuyst, and **William Nganje**, "Supply-Side Risks and Malting Barley Procurement and Storage." Paper for the WAEA Annual Meetings, Vancouver, Canada, June 29-July 3, 2000.
28. **Nganje, W. E.** and Mazzocco, M."HACCP, Firm Level Food Safety Liability, and Economic Efficiency." Selected Paper presented at the AAEA Annual Meeting, Tampa FL, July 30-August 2, 2000.
29. **Nganje, W. E.** and Brad Stiefel, Frayn Olson, Willian Nelson, and Cheryl DeVuyst. "Financial management Strategy of New Generation Cooperative Under Alternative Risk Considerations." Selected Paper Presented at the NC-221 Annual Meetings, Minneapolis FED, October 1-3, 2000.
30. **Nganje, W. E.** " A Framework for Analyzing Economic Effectiveness of HACCP." Proceedings for The International Conference on HACCP Objectives, December 3-5, 2000, Washington DC.
31. **Rathge, Richard** and Cheryl Wachenheim. "Societal Perceptions of Agriculture" paper presented at the annual meetings of the Rural Sociological Society, Washington, DC. August 14, 2000.
32. **Schuck, Eric.** *Barriers to Adopting Efficient Irrigation Technology*, Department of Agribusiness and Applied Economics Seminar Series, North Dakota State University, October 20, 2000, Fargo, ND.
33. **Schuck, Eric.** *Irrigation Water Rate Reform and Endogenous Technological Change*, Paper presented at the Western Agricultural Economics Association Annual Meeting, June 29-July 2, 2000, Vancouver, BC.
34. **Shultz, Steve.** Strategies to Quantify Watershed Level Flood Damage Over Time & Space. AWRA Annual Water Resource Conference, Miami FL, Nov 6-9, 2000.
35. **Shultz, Steve.** Sustainable Forestry as a Weapon in the War on Drugs:Case Study from the Tropics of Cochabamba, Bolivia. 8th Intl. Symp. on Society & Resource Mgmt., Bellingham WA, 6/2000.

36. **Shultz, Steve.** The Feasibility of Wetland Restoration & Impoundment Programs to Reduce Flooding in the Red River Valley. 8th Intl. Symp. on Society and Resource Mgmt., Bellingham WA, 6/2000
37. **Shultz, Steve.** The Feasibility of Wetland Restoration to Reduce Flood Damage in the Maple River Watershed. Paper and Poster at: Land Stewardship in the 21-Century & the Contribution of Watershed Management, Tucson Arizona, March 2000
38. **Shultz, Steve.** The Feasibility of Wetland Restoration to Reduce Flood Damage in the Maple River Watershed. People & Partnership Symposium (USFS & NDSU), August 24, 2000.
39. **Wachenheim, C.J.** When it becomes a multidisciplinary adventure: consulting for the National Pork Producer's Council On Farm Odor/Environmental Assistance Program. ASAE Swine Housing Conference (Swine Housing 2000), October 9 to 11, Des Moines, Iowa.
40. **Wachenheim, C.J.** Mandatory price reporting in the livestock industry; an alternative view. Paper presentation at The American Consumer in the Changing Food System. Washington D.C. May 3-5, 2000.
41. **Wachenheim, C.J.** Transgenic sugarbeets: the many voices of the marketing channel. Presented to the faculty, Agribusiness and Applied Economics, North Dakota State University, September 22, 2000.
42. **Wachenheim, C.J.** and W. Lesch. Motivating Students in Agriculture to Participate in Experiences Abroad. Paper presentation at the International Agribusiness Management Association Forum, 2000, June 25 to 28, Chicago, Illinois.
43. **Wachenheim, C.J.** and D. Saxowsky. The Role of Agribusiness in Facilitating Diversified Investment of Equity Capital in Production Agriculture. Poster presentation at the International Agribusiness Management Association Forum, 2000, June 25 to 28, Chicago, Illinois.
44. **Wilson, William W.,** *Transnational Grain Firms: Evolution and Strategies in North America*, to an AAEA Organized Symposium titled Structural Change in Field Crop Handling and Processing Industries August 2000, Tampa, Florida.
45. **Wilson, William W.,** B. Dahl, and D. Johnson. *Procurement Strategies: Impacts of Quality Risks in Hard Wheat* to the WAEA/WEA International Conference Annual Meetings, Vancouver BC, July 1, 2000.
46. **Wilson, William W.,** Invited Presentations to the University of Western Australia, Perth. May 25 and May 31, 2000: *Procurement Strategies: Impacts of Quality Risks in Hard Wheat Modeling Competitive Bidding in International Grain Trade.*

47. **Wilson, William W.**, *Changes in grain marketing Industries in the United States and Canada*, to the Conference title Challenges in Agricultural Trade Under CUSTA, Fargo, ND. October 26, 2000.
48. **Wilson, William W.**, *Structural Changes in the Food Industry and Implications for Distributors*, to the Retailer Owned Food Distributors and Associates, Scottsdale, AZ. November 12, 2000.
49. **Wilson, William W.**, *Transnational Grain Firms: Evolution and Strategies in North America*, in an organized symposium titled *Structural Change in Field Crop Handling and Processing Industries*, AAEA Annual Meetings, Tampa. August 1, 2000.

C. OUTREACH

1. Professional Service

Several faculty members occupy national or regional positions in professional organizations. Larry Leistriz is Membership Director of the International Association for Impact Assessment. Eric Schuck assumed Demcey Johnson's position on the Western Agricultural Economics Association's Council during AY01. Cheryl DeVuyst is an active member of CWAE, the Committee on Women in Agricultural Economics. Bill Wilson was reappointed as a director of the Minneapolis Grain Exchange this year. David Lambert stepped down during the summer of 2001 as chair of the American Agricultural Economics Association's committee, *Economic Statistics and Information Resources*.

2. Alumni Events and Other Community-Related Activities

Department faculty are active in agricultural fraternities and sororities, attend reunion and honors banquets, and participate in agricultural shows and events in which College alumni are frequently present. Several faculty are active in the Fargo/Moorhead Chamber of Commerce committee on agribusiness.

3. Fund-Raising Accomplishments

The Department of Agricultural Economics offers the largest scholarship program on campus. Over \$50,000 was granted to students in Agricultural Economics this year. Much of the fund raising, coordination, and judging of applicants is done by Tim Petry.

Fund-raising for individual department-sponsored events, such as travel of the student NAMA chapter to the national competition in Denver in April, was conducted by students with organizational oversight by individual faculty members.

4. Other Outreach Activities

Department faculty continue to provide talks, lead discussions, and provide media information to a variety of state and national requests.

D. SPECIAL INITIATIVES

1. Cultural Diversity

See #4, International Activities. Hiring and promotion decisions are based on professional potential and performance.

2. Affirmative Action/Equal Opportunity

The department continues to stress equal access to advertised positions. Hiring decisions, annual evaluations, and promotion and tenure decisions are based entirely upon merit.

3. Cooperation Programming/Interdisciplinary Efforts/Interinstitutional

Activities

Below is a listing of interstate research projects in which Agricultural Economics faculty are involved. In addition to these existing multi-state research projects, many faculty were involved in preparation and submission of multi-state, multi-discipline research/Extension proposals under the Initiative for Future Agriculture and Food Systems (IFAFS) RFP closing in May, 2001.

Principal Investigator	Regional Committee/Title
Lambert, David K.	NCA-12, Dept Chairs in Ag Econ from NC States
Lambert, David K.	NC-208, Impact Analysis and Decision Strategies for Agricultural Research
Nganje, William and Cheryl DeVuyst.	NC-221, Financing Agriculture and Rural America: Issues of Policy, Structure, and Technical Change
Leistriz, F. Larry	NC-222, Impact of Technology on Rural Consumer Access to Food and Fiber Products
Leistriz, F. Larry	NE-162, Rural Economic Development, Alternatives in the New Competitive Environment
Nganje, William and Cheryl DeVuyst	NE-165, Private Strategies, Public Policies, and Food System Performance
Johnson, D. Demcey	NCR-134, Applied Commodity Price Analysis Forecasting and Market Risk Management
Koo, Won W.	NCR-170, Research Advances in Agricultural Statistics

Koo, Won W.	NCR-179, Agricultural and Rural Transportation System
Nelson, William C.	NCR-194, Research on Cooperatives
Schuck, Eric	W-190, Irrigation Technology and Adoption
Shultz, Steven D.	W-133, Benefits and Costs of Resource Policies Affecting Public and Private Land
Wachenheim, Cheryl J.	WCC-72, Agribusiness Research Emphasizing Competitiveness and Profitability

4. International Activities

Faculty participated in many international activities this year. Training sessions for international wheat trading groups included groups from several countries. The Department has hosted visiting professors this year from Korea, France, and Continuing Education. Faculty activities have included trips to discuss wheat markets in Australia, Tunisia, and Thailand for Bill Wilson. George Flaskerud spent May and June, 2001 collaborating with grain marketing economists in *L'Institut Technique des Cereales et des Fourrages (ITCF)* in Boigneville, France. George Flaskerud, David Lambert, and Bill Wilson were invited to represent U.S. wheat production and marketing procedures to over 8,000 farmers during the *Rendez-vous International des Grandes Cultures*, an international farm show held near Paris June 13-14, 2001. Larry Leistriz and Becky Leitch attended the International Association for Impact Assessment meetings in Cartagena, Colombia in June 2001. Bill Nelson visited the Ukraine in his continuing work in establishing cooperatives and new marketing programs in the countries of the former Soviet Union. Steve Shultz collected data for agroforestry and ecotourism research projects in Costa Rica. Cheryl Wachenheim accompanied a group of 24 NDSU students to the *Ecole Superieure d'Agriculture* in Angers, France for the month of June. Dr. Wachenheim was invited to present a one-week short course on animal production to students in the *Ecole Superieure d'Agriculture* in December 2000.

5. Economic Development Efforts

One of the primary missions of the department is to aid in economic development efforts in North Dakota. Several faculty members are directly involved in economic development as a major component of their job responsibilities. Many of the grants, publications, presentations, and workshops listed earlier in the annual report reflect these efforts. Larry Leistriz, Richard Rathge, and Kathy Tweeten have primary responsibilities in economic development.

6. Assessment

A comprehensive assessment plan was developed in June 1997. Dr. Eric DeVuyst was placed in charge of the department's assessment program during 2000-2001. A goal for the 2001-2002 year is to revise the department's assessment plan. Student outcomes identified in the department's current assessment plan include:

1. Proficiency in written communication

Written skills were assessed in upper division writing assignments for two courses (AGEC 494 & 420). Results indicated problems in written communication for a sizable proportion of our students. Departmental responses will be developed at the first meeting of the undergraduate program committee (UPC) meeting in the fall of 2001.

2. Proficiency in oral communication

Oral skills were assessed in upper division presentations for two courses (AGEC 420 & 451), including the presentation delivered by the department's National Agribusiness Marketing Association team that competed at the national championships in Denver in April. Oral skills were deemed very good, especially use of multimedia techniques (e.g., PowerPoint) in oral presentations.

3. Effective teamwork and group decision making skills

Teamwork and group decision making skills were rated as being above acceptable levels. Many of the courses in the department require team projects, giving students plentiful opportunities to learn effective team dynamics in addressing assigned problems and developing group presentations.

4. Integration of subject matter knowledge and other basic skills to solve economic and management problems

Specific assessment activities included administering the math skills assessment instrument developed under the leadership of Dr. Bill Martin of the Mathematics Department to 53 students in AGEC 339. Results of the assessment conducted in the fall of 2000 identified several weaknesses in students' abilities to use rudimentary mathematical techniques in addressing common problems in economics. Indicated departmental response is to increase the usage of mathematics across all courses to reinforce math skills for our students.

5. Ability to use computer technology

Although some students still are operating at a less than effective level of computer literacy, the heavy reliance on computer applications in most of the department's courses ensures the majority of our students have achieved at least minimum skills necessary to enter the workforce.

6. Graduate Program Assessment

1. Students will demonstrate ability to conduct research in agricultural economics using quantitative and qualitative research

All student theses completed during 2000 were evaluated by the graduate program committee and deemed to reflect a high level of research skills in our M.S. graduates.

2. Integration of subject matter knowledge and other basic skills to solve economic and management problems

Graduate courses are designed to ensure students attain a high level of competency in applying economics to real problems. Two reformulated courses (AGEC 744 and 746) will be offered during the 2001-2002 academic year to further stress application of subject matter knowledge and other basic skills to problems in agribusiness.

7. Addressing Institutional Purposes

Teaching – The department faces many new opportunities. The agribusiness major became available to undergraduate students commencing in the fall 2000 semester. This new program stresses the importance placed on expanding the traditional role of the department to include both rural and urban students. The process underlying the development of the new major included significant input from the College of Business Administration. Addition of the Economics program to the departmental mission poses many short run challenges but opens many new opportunities in the longer term. Faculty are involved in the development of new interdisciplinary programs in transportation and logistics and in electronic commerce.

Research – The department enjoys a national reputation in several research areas. Research programs in wheat quality, commodity transportation issues, and international agricultural trade are well respected around the country. Several researchers continue to produce a large number of respected articles in nationally reviewed academic journals. Research of local interest has also identified potential and actual costs associated with plant disease, international trade effects on North Dakota producers, and provided economic analyses of natural resource issues including floodplain characteristics and waste management from large animal confinement facilities. Involvement with agribusiness firms and groups by several of the faculty increase the opportunities for mutually beneficial engagement.

Outreach/Extension – Extension is the quintessential model of the engaged university. Continued budgetary constraints have placed some restrictions on traditional outreach methods. Faculty continue to seek greater efficiency in program delivery through adoption of information technology techniques. Addition in the fall of a livestock economist will greatly enhance research and outreach programming in livestock economics.

8. College/Unit Planning; Functions/Activities/Accomplishments

The Department continues to undergo many changes. The Department is implementing many course changes through course deletions, modifications, and development of new courses. The planning procedure was initiated with the recommendations of the CSREES review in May 2000. Departmental subcommittees were given responsibility to identify specific curriculum changes within the undergraduate and graduate degree programs. Course rationalization is not complete, but has made a substantial number of changes in the programs offered by the Department. Problems confronting future efforts are resource constraints in staffing all of the courses identified to be important for the program.

Program concentration has also resulted from both the CSREES review as well as departmental directions identified over the last several years. We are continuing to place high importance on developing research, teaching, and outreach expertise in agribusiness. We have identified natural resources and international trade as important areas for the Department

in economics. Farm level decision making is an extremely important topic for research and outreach in the state, but is unfortunately understaffed within the Department at the current time.

Future planning efforts will concentrate on prioritization of program focus areas as new resources become available.

E. Other Goals

The previous section (D.8) highlights the directions in which the department is moving, and the process developed to implement these changes.

II. COMMENTS

What each department's future plans are, future challenges and program strengths, as well as the overall unit.

A major strength identified in last year's external reviews of the Department is the number of new faculty and the willingness to adapt to the changing North Dakota economic environment. Although disagreeing on the best procedure for implementing change, most tenure track faculty agree that change is necessary to enhance the role of the Department in shaping North Dakota's future. We have completed several major changes in the last two years. The immediate task before the Department is to successfully implement these changes.

The extent of these changes, as well as the major changes we anticipate in the near future, present several challenges to the department. We must ensure that the changes we have made are successful. Close evaluation of the agribusiness major, for example, is essential to achieve the student growth we anticipated for this new major. We must also grow into the teaching, research, and outreach programs consistent with our new name, the Department of Agribusiness and Applied Economics.

The major problem currently constraining attainment of departmental objectives is lack of resources. We are severely overcommitted in teaching, generating almost double the number of student FTEs than we are budgeted. Not only does this require subsidization of the teaching program by research and outreach resources, but the increase in students places financial stress on a departmental budget that has not been adjusted for the increase of nearly 3.0 FTEs in teaching loads between AY01 and AY02. The Department does enjoy support from College and University administration and will hopefully receive necessary resources in the future to allow the teaching program to be supported from the teaching budget without requiring transfer of effort from other budgets such as the Experiment Station.

Faculty have been very successful in generating external grants and contracts. Continued growth in this area will allow high quality research to be conducted under shrinking real budgets from state and federal appropriations. Faculty efforts in generating external funds is consistent with the current University identification of enhancing the research standing of NDSU.

How each department makes use of assessment data in decision making within the framework of the institution's mission and purpose.

Results of the mathematical skills assessment conducted during the fall 2000 semester indicated a poor ability of many of our students to incorporate appropriate mathematical techniques in economic decision making. Departmental response will be to increase use of mathematics across the curriculum to reinforce skills learned in calculus or other math courses. Written and oral communication skills of the students are adequate in many cases, though continued concentration on and rigorous evaluation of written assignments is necessary to improve the written communication skills of our students.

III. APPENDIX

A. AY 2001 courses

Instructor	Prefix	Course No	Title	Credits	Enrollment	% Responsibility	Course Rating	Instructor Rating	FTEs
Leitch, B	ECON	150	Quant. Econ	2	12	100%	4.57	4.71	0.030
Leitch, B	EC/AGEC	201	Principles of Microeconomics	3	185	100%	3.97	4.35	0.694
Mack, L	EC/AGEC	202	Principles of Macroeconomics	3	233	100%	3.85	3.94	0.874
Mack, L	EC/AGEC	202	Principles of Macroeconomics	3	111	100%	3.94	4.02	0.416
Petry, T	AGEC	244	Agric Mktg, Livestock Emphasis	3	105	100%	3.32	2.77	0.394
DeVuyst,C	AGEC	246	Agricultural Finance I	4	69	100%	4.43	4.63	0.345
Park, Joon	AGEC	343	Intermediate Macro	3	40	100%	2.81	2.64	0.221
Kim, M	AGEC	344	Agricultural Price Analysis	3	43	100%	3.22	3.43	0.237
Nganje, W	AGEC	346	Agricultural Finance II	3	43	100%	4.06	4.36	0.237
Shultz, S	AGEC/BUSN	347	Principles Real Estate	3	79	100%	3.53	3.17	0.436
Nelson, B	AGEC/BUSN	374	Cooperatives	3	37	100%	3.76	3.49	0.204
Saxowsky, D	AGEC	375	Applied Agricultural Law	3	11	100%	4.00	3.89	0.061
Mack, L	AGEC	380	Public Policy Choices	1	30	100%			0.055
Mack, L	AGEC	382	Econ State & Loc Govt	2	49	100%	3.52	3.62	0.180
Wachenheim, C	AGEC	399	AgriSales	3	35	100%	4.07	4.23	0.193
DeVuyst,E	AGEC	420	Int Farm Mgmt	3	20	100%	4.56	4.61	0.110
Nganje, W	AGEC	446	Agribusiness Finance	3	36	100%	3.88	4.23	0.199
Wachenheim, C	AGEC	451	NAMA II	2	10	100%	4.56	4.11	0.037
Berwick, M	AGEC	472	Logistics/Trans	3	1	100%			0.006
Shultz, S	AGEC	480	Nat Resource & Rural Econ Policy	3	9	100%	3.68	3.22	0.050
Petry, T	AGEC	494	Livestock Mtng	1	1	100%	4.00	4.00	0.002
Shultz, S	NRM	491	NRM Seminar	1	10	100%	2.46	3.00	0.018
Nganje, W	AGEC	646	Agribusiness Finance	3	4	100%	4.33	5.00	0.042
Shultz, S	AGEC	680	Nat Resource & Rural Econ Policy	3	9	100%	3.00	3.14	0.094
Wilson, W	AGEC	744	Agricultural Marketing	3	8	50%	4.88	4.88	0.042
Wachenheim, C	AGEC	744	Agricultural Marketing	3	8	50%	4.25	4.13	0.042

Bitzan, J	AGEC	772	Rural Logistics	3	5	100%	4.40	4.40	0.052
Wilson, W	AGEC	791	TTT/Spreadsheet-Based Dec Models	1	5	100%	5.00	5.00	0.017
Koo, W	AGEC	791	TTT/Forecasting Econ Time Series	1	4	100%			0.014
DeVuyst, E	AGEC	793	Int Frm/Ranch Mgmt	3	2	100%			0.021
Various	AGEC	798	Masters Thesis	11	8	100%			0.306
								Total	5.625
Instructor	Prefix	Course No	Title	Credits	Enrollment	% Response	Course Rating	Instructor Rating	FTEs
Leitch, B	AGEC	150	Quantitative Economics	2	17	100%	4.12	4.53	0.043
Petry, T	EC/AGEC	201	Principles of Microeconomics	3	228	100%	3.76	3.95	0.855
Mack, L	EC/AGEC	202	Principles of Macroeconomics	3	151	100%	3.52	3.56	0.566
Mack, L	EC/AGEC	202	Principles of Macroeconomics	3	138	100%	3.57	3.74	0.518
Leitch, B	AGEC	220	World Agricultural Development	3	31	100%	4.04	4.46	0.116
DeVuyst, E	AGEC	242	Farm & Agribusiness Management 1	4	89	100%	4.31	4.69	0.445
Lambert, D	AGEC	339	Quant Methods & Decision Making	3	52	100%	2.40	2.21	0.287
Mack, L	AGEC	342	Farm & Agribusiness Management 2	3	34	100%	3.32	3.04	0.188
Saxowsky, D	AGEC	375	Applied Agricultural Law	3	62	100%	3.66	3.49	0.342
Mack, L	AGEC	380	Public Policy Choices	1	36	100%			0.066
Wilson, W	AGEC	444	Crops Marketing	3	25	100%	4.24	3.88	0.138
Wilson, W	AGEC	445	Agricultural Market Organization	3	18	100%	4.00	4.00	0.099
Wachenheim, C	AGEC	450	NAMA	1	14	100%	4.23	4.31	0.026
Koo, W	AGEC	470	Agricultural Trade	2	24	100%	3.29	2.82	0.088
Schuck, E	AGEC	484	Agricultural Policy	2	40	100%	4.02	4.07	0.147
Various	AGEC	494	Independent Study	3	3	100%			0.017
Leitch, B	AGEC	496	Field Experience	3	9	100%	4.50	5.00	0.050
Wilson, W	AGEC	644	Crops Marketing	3	2	100%			0.021
Koo, W	AGEC	670	Agricultural Trade	2	2	100%			0.014
Schuck, E	AGEC	701	Research Philosophy	1	12	100%	4.10	4.70	0.042
Koo, W	AGEC	710	Econometrics	3	10	100%	3.33	3.22	0.104
Johnson, D	AGEC	739	Analytical Methods	3	10	100%	4.70	4.80	0.104
DeVuyst, E	ECON	741	Advanced Microeconomics	3	11	67%	4.73	4.73	0.076
Schuck, E	ECON	741	Advanced Microeconomics	3	11	33%	4.56	4.56	0.038

Tolliver, D	AGEC	771	Non-Metro Trans Systems	3	6	100%	3.80	4.20	0.063
Various	AGEC	798	Masters Thesis	30	14	100%	5.00	5.00	1.458
								Total	5.909
Instructor	Prefix	Course No	Title	Credits	Enrollment	% Response	Course Rating	Instructor Rating	FTEs
Wachenheim, C	AGEC	494	Study Abroad	3	24	100%			0.132
Lambert, D	AGEC	496	ST/Issues/Int'l Integration Trade	3	24	100%			0.132
Lambert, D	AGEC	696	ST/Issues/Int'l Integration Trade	3	1	100%			0.010
Lambert, D	AGEC	793	Study Abroad	3	1	100%			0.010
Various	AGEC	793	Masters Paper	17	5	100%			0.295
								Total	0.581
								Dept Total	12.115